

APPENDIX A

Meeting Notes and Correspondence

Kickoff Meeting

VT 15/Pearl Street Scoping Study Alternatives Analysis & VT 15 Athens Drive to I-289 Shared Use Path,
195311490 & 19531507

Date/Time: October 16, 2017 / 11:00 AM
Place: Stantec, Mt. Mansfield Conference Room
Next Meeting: TBD
Attendees: Christine Forde (CCRPC), Greg Edwards (Stantec), Erik Alling (Stantec), Sean Neely (Stantec), Polly Harris (Stantec)
Absentees: N/A
Distribution: Attendees

Item:	Action:
Updated Proposal There are a few minor errors in the most recently submitted version of the SOW	Greg will update and resubmit the proposal
Susie Wilson/VT 15 Intersection Scoping Study VTrans is currently scoping intersection improvements to the Susie Wilson/VT 15 intersection. Christine requests that Stantec keep in contact with VTrans so that the two studies do not end up contradicting each other.	Stantec will contact VTrans PM Patti Coburn to establish communication to be maintained throughout the scoping process.
Base Mapping The CCRPC has developed base mapping for the Pearl St. study and will also provide base mapping for the shared use path study. Christine requests that Stantec work with Pam Brannigan directly.	Sean will contact Pam and will work with her to receive base mapping and associated GIS files.
Permanent Project FTP Site An FTP site will be established to facilitate the transfer of project files.	Erik will create the permanent FTP site and will distribute a link to the team members.
Traffic Analysis Stantec will perform analysis on Susie Wilson/VT 15 to determine impacts of adding a pedestrian phase.	Stantec has crash data for shared use path project, Sean to obtain crash data for Pearl Street project.
Pearl Street Median Island	

Christine mentioned that an acceptable alternative to explore would be the removal of the median island along VT 15.	Christine to verify with Robin that removal of the island is an option that may be considered.
Local Concerns Meeting Greg mentioned that a LCM should be organized as soon as is practical. After some discussion, attendees agreed that early to mid-December would be a good time to hold the meeting	Greg to provide a sample LCM presentation. Christine will reach out to the Town and the Village to find some potential dates. Christine to determine if holding a combined meeting for both projects is feasible. Greg/Stantec to obtain property owner addresses to use for meeting invitations.
Environmental/Permitting For the scoping of each project, Stantec will need to determine permitting needs. This will potentially include NEPA, CGP, Wetlands & Corps permits.	Polly to conduct desktop reviews of each project area. Permitting needs will be assessed and included in the reports.
Utilities Utility information will need to be included in the alternative analyses of both studies.	Greg will contact utility companies to obtain available relevant information.
Town/Village path/Pedestrian Commissions Both the Town and the Village have path and pedestrian commissions. They should be involved throughout the scoping process. Additionally, the State should be made aware of the projects.	Erik will coordinate with Village and Town representatives. Erik will coordinate with VTrans bike/ped program manager Jon Kaplan.

The meeting adjourned at 12:00 PM

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

Stantec Consulting

Erik Alling, PE
Project Manager
Phone: (802) 864-0223
Erik.Alling@stantec.com

Attachments: Sign-in Sheet
c. Design File

Local Concerns Meeting

VT 15 Athens Drive to VT 289 Scoping Study
Essex, Vermont

Date/Time: December 11, 2017
Place: Essex Town Office
Next Meeting: TBD
Attendees: Dennis Lutz, Darren Schibler – Town of Essex
Christine Forde, Marshall Distel -CCRPC
Greg Edwards, Sean Neely - Stantec
6 residents – see attached sheet

Distribution: Project Committee

Summary

Meeting was held to better define existing issues and concerns in the project area. The meeting was hosted by the Town of Essex. Introductions were given by Dennis Lutz and Christine Forde. Stantec provided a PowerPoint presentation describing existing roadway and traffic conditions. The public was invited to provide comments and ask questions. Attendees were supportive of the project, as well as thankful for the existing bicycle and pedestrian infrastructure.

Resident Comments

- Ideally pedestrians could stay on one side of the street or the other. Having to cross the street unnecessarily is frustrating. Residents of Athens Drive and Taft Street desperately want a sidewalk on the north side of the street.
- Lang Farms attracts considerable pedestrian traffic for Friday evening events in summer.
- Many Essex High School students walk or ride their bike to and from school.
- With 30 new homes planned for the Kolvoord property, there will be more pedestrian demand on the south side of the street in general, and more students walking and biking to and from the High School.
- In the long-term, properties on the north side of the street will likely be developed, increasing demand.
- The residential population is likely to increase in the future, as is travel demand generated from the Town Center. We need to connect the Village and Town Center with adequate bicycle and pedestrian facilities.
- Motor vehicle speed is a concern. Physical separation, both horizontal and vertical, should be considered for bicycle and pedestrian facilities in the project area. The local population verbally commits to walking and biking, but it can be challenging without separation.

December 11, 2017

Local Concerns Meeting

Page 2 of 3

- Bike commuting between Essex and South Burlington eight months out of the year, I ride along VT 15 north of the project area. I use the countryside path though, crossing at Maplefield's. I refuse to ride through the project area along VT 15, because of the interchange with VT 289. If there were a 10-foot-wide shared use path along the south side of VT 15 through this area, I would use it.
- Cycling on VT 15, crossing the ramps through the interchange with VT 289, is a scary place to ride. Traveling westbound through the interchange is worse than traveling eastbound. There are no crosswalks over the ramps for westbound travel, and the slip lane for getting on VT 289 is challenging to cycle through, dealing with motor vehicles. Cycling eastbound by McDonald's is tricky, because of the dedicated right-turn lane. This makes it difficult to get to the shared use path connection on the east side of Billie Butler Drive.
- If there is a shared use path built, it could be challenging to deal with transitions for crossing VT 15 or at intersections.
- There is a pinch point on VT 15 near the apartments south of the project area, where the last storm sewer upgrade was made. Recent repaving has made a big difference.
- Cycling along VT 15 in the project area is challenging because of the hill, and the narrowness along that section. The Saybrook shared use path is more gradual, and you don't have to deal with traffic, although it can take longer.
- If bike lanes are added, widening the road, maybe motorists would increase speed. Something to be said for a narrower road.
- It's hard for motorists to see pedestrians along VT 15 in this area without street lights. The Indian Brook crossing is the most dangerous spot. Adequate street lighting is an important component to include in the project.
- A shared use path might be better placed along the south side of the road. There is currently more room to walk along the south side, with a drainage ditch running along the north side. There is existing sidewalk leading up to the project area along the south side.
- Consider a reduction in speed limit through this area to increase comfort for pedestrians and cyclists. With more development in the future, there could be access issues.
- For crossing Indian Brook, maybe a cantilever bridge would work, if built simultaneously with replacing the existing culvert. There is a cantilever bridge for active travel on Industrial Ave that works well.

The meeting adjourned at 8:15pm

December 11, 2017

Local Concerns Meeting

Page 3 of 3

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

Stantec Consulting Services Inc.



Greg Edwards, PE

Project Manager

Greg.Edwards@stantec.com

Attachment: Sign-in Sheet

c. Project Committee

December 11, 2017

[illegible]

From: [Edwards, Greg](#)
To: [Smiley, Lynn](#)
Cc: [Neely, Sean](#)
Subject: Fwd: Local Concerns Meeting | December 11, 2017, 7:00-8:30pm, 81 Main Street, Essex Jct., VT 05452
Date: Tuesday, November 28, 2017 9:42:39 AM

Can you create an email list for 195311507 and put this person in it?

Get [Outlook for iOS](#)

From: Edwards, Greg
Sent: Tuesday, November 28, 2017 6:39:21 PM
To: Tom Soules
Cc: Christine Forde; Dennis Lutz; Neely, Sean
Subject: Re: Local Concerns Meeting | December 11, 2017, 7:00-8:30pm, 81 Main Street, Essex Jct., VT 05452

Hi Tom,

Thank you for your interest and input. With this and others input we will be developing alternatives. Once we doing an alternatives presentation will be noticed and we will put you on the email list.

In the meantime if you have any suggestions on the route and type of facility we welcome your thoughts.

Greg
Get [Outlook for iOS](#)

From: Tom Soules <tksoules@msn.com>
Sent: Tuesday, November 28, 2017 9:43:59 AM
To: Edwards, Greg
Subject: Local Concerns Meeting | December 11, 2017, 7:00-8:30pm, 81 Main Street, Essex Jct., VT 05452

Hello Gregory,

I won't be able to make the Dec 11 meeting, but I would very much encourage such a project.

I often walk and/or ride my bike from Athens Drive up RT 15 to I289. I do this to shop and make caregiving visits to my parents. My vision is not good enough for a driver's license.

Each time I make this trip I feel like I'm taking my life in my hands.

Yes, there is a long way around, but it take almost 3 times longer one way, and my schedule doesn't allow that. And, sometimes my parents need me sooner then later. There is also church on Sundays, and the occasional dentist/doctor appointment to get to. In addition, I enjoy walks and bike rides, often going between the town and the village down this corridor. In my mind it the number 1 project that would do the most to improve pedestrian and bicycle safety and connections between the Village and the town. I'm sure it would also result in a positive business and social benefit for our communities. I currently view this corridor as the big divide.

Best regards, Tom

From: Front Porch Forum <countryside@frontporchforum.com>

Sent: Monday, November 27, 2017 5:20 PM

To: tksoules@msn.com

Subject: Countryside Front Porch Forum No. 2088



[MEMBER FAQ](#)

[COMPOSE POSTING](#)

[BECOME SUPPORTING MEMBER](#)

ISSUE NO. 2088 NOVEMBER 27, 2017

VT15 Sidewalk/Path Study: Athens Drive to VT289

DARREN SCHIBLER, DSCHIBLER@ESSEX.ORG, PLANNER, ESSEX

CALENDAR

Event: Dec 11, 2017, 7:00 PM to 8:30 PM

The Town of Essex and the Chittenden County Regional Planning Commission are hosting a Public Meeting to hear your feedback on how to improve pedestrian and bicycle connections between the Village and VT289 along VT 15. Please attend and provide your thoughts on what is needed in this corridor. Additional information can be found at <https://www.ccrpcvt.org/our-work/transportation/current-projects/scoping/vt15-sidewalk-path-scoping-athens-drive-to-vt289/>. If you are unable to attend and have comments/questions, please contact Gregory Edwards, Project Manager, Stantec Consulting, 802-864-0223 or greg.edwards@stantec.com.

MAYVILLE [READ POST \(AND 2 MORE\) »](#)

From: [Edwards, Greg](#)
To: [Smiley, Lynn](#)
Cc: [Neely, Sean](#)
Subject: Fwd: Sidewalk 289
Date: Tuesday, November 28, 2017 9:42:35 AM

Can you create an email list for 195311507 and put this person in it?

Get [Outlook for iOS](#)

From: Edwards, Greg
Sent: Tuesday, November 28, 2017 6:41:59 PM
To: David Gray
Cc: Christine Forde; Dennis Lutz; Neely, Sean
Subject: Re: Sidewalk 289

Thank you for your interest and input. With this and others input we will be developing alternatives. Once we do, an alternatives presentation will be noticed and we will put you on the email list.

In the meantime if you have any suggestions on the route and type of facility we welcome your thoughts.

Get [Outlook for iOS](#)

From: David Gray <david@grayvermont.com>
Sent: Tuesday, November 28, 2017 5:57:13 AM
To: Edwards, Greg
Subject: Sidewalk 289

Greetings,

My immediate thought is, maintenance of existing sidewalks.

I live at Ketcham and walk 4-5 miles daily on various routes between my home and the 5 corners. Many sidewalks are in tough shape, some with serious tripping hazards.

Sent from my iPhone

From: [Edwards, Greg](#)
To: [Smiley, Lynn](#)
Cc: [Neely, Sean](#)
Subject: Fwd: Sidewalk/bikepath on 15
Date: Tuesday, November 28, 2017 9:44:44 AM

Can you create an email list for 195311507 and put this person in it?

Get [Outlook for iOS](#)

From: Darren Schibler <DSchibler@ESSEX.ORG>
Sent: Tuesday, November 28, 2017 9:36:14 PM
To: Edwards, Greg; Christine Forde
Subject: FW: Sidewalk/bikepath on 15

Hi Christine and Greg,

I got some direct feedback from my Front Porch Forum post last night and just wanted to pass it along. I'll tell Bob we'd love to see him at the meeting.

Best,
Darren

From: bobchaffee@aol.com [mailto:bobchaffee@aol.com]
Sent: Monday, November 27, 2017 9:20 PM
To: Darren Schibler
Subject: Sidewalk/bikepath on 15

Sounds like a great idea. I often see people walking on the side of the road and think how dangerous that is. There is not room on the roadway for bicycles, either.

Bob Chaffee
7 Walnut Lane
Essex Jct.

Memorandum

TO: Evan Teich, Municipal Manager
Essex Selectboard
Essex Junction Trustees

FROM: Dennis Lutz, P.E, Public Works Director
Darren Schibler, Town Planner
Rick Hamlin, P.E., Village Engineer
Robin Pierce, Village Planner
Ricky Jones, Village Public Works Superintendent

DATE: 17 July 2018

SUBJECT: Preferred Alternative for the Route 15 Sidewalk/Path Study for the Section from Athens Drive to VT Route 289

ISSUE: The issue is whether or not the Selectboard and Trustees will approve the staff recommendation for Alternative 3 (with added comments) as outlined in the Scoping Study prepared by Stantec Engineering.

DISCUSSION: A Scoping Study has been completed for a new multi-purpose path using funding provided by both communities, VTRANS and the CCRPC. Stantec Engineering recently completed the referenced Scoping Study, reviews have been made by staff on the project and public hearings have been held for input on the proposed path. In order to apply for funding to prepare final designs, obtain right-of-way and construct the project, the local municipal governing board must select a preferred alternative. Since the project limits fall within both the Town and the Village, both Boards need to take action and agree on the selected alternative.

Village and Town Engineering and Planning Staffs have worked cooperatively to produce a unanimous series of recommendations relative to the project. The rationale for the recommendations is not contained in this memorandum, but staff will be available to present that rationale to the two Boards when this memorandum is presented. The Staff recommendations are:

- 1) The Preferred Alternative is Alternative 3: An 8-foot shared use path (and bike lanes) as described on page 21 of the Scoping Study and
- 2) The proposed path should include lighting along the path for its entire length, with lighting fixtures spaced appropriately, due to the location of the path and its importance as a critical multi-modal link between the Village and the Town and
- 3) As a component of the planned VTRANS paving project along this section of VT15, the roadway will be configured to have two 11-foot lanes and a 4-foot bike lane on each side of the road to accommodate high speed bicyclists and
- 4) The project shall include replacement of the current 5-foot wide sidewalk east of Fairview Drive with the 8-foot multi-purpose path and

- 5) The project shall terminate on the east side of the VT15 Bridge over the Circumferential Highway with an 8-foot wide multi-purpose pedestrian/path crossing on the bridge.

RECOMMENDATION: It is recommended that the Board of Selectmen and the Village Trustees approve Alternative 3 as the preferred project alternative, including the four recommendations by Staff as outlined in this document, for the Route 15 Sidewalk/Path Study on the Section from Athens Drive to VT Route 289.

VTrans Coordination Meeting

VT 15 Athens Drive to VT 289 Scoping Study
Essex, Vermont

Date/Time: March 26, 2018
Place: 5th Floor Board Room, National Life, Montpelier, VT
Next Meeting: TBD
Attendees: Dennis Lutz, Darren Schibler – Town of Essex
Robin Pierce – Village of Essex Junction
Christine Forde, Marshall Distel -CCRPC
Greg Edwards - Stantec
Amy Bell, Dick Hosking, Jon Kapan, Pam Thurber, James Clancy, Tyler Hanson - VTrans
Distribution: Project Committee

Summary

Meeting was held to seek VTrans input early on in the scoping process. This input will help better define the alternatives to evaluate including the type of facility and specific widths to use. Stantec provided a PowerPoint presentation describing some of existing roadway and conditions and a potential shared use path alternative.

Meeting Discussions

- **Shared use path typical section dimensions:** Planning for a 4-foot shoulder that serves as a on-road bike lane was supported. This may be a component of the FY2019 VTrans resurfacing project but this will not be known until further plan development this year. Providing a 5-foot buffer to provide separation from traffic, snow storage and stormwater treatment was supported. VTrans pointed out 8-foot is the minimum width of a shared use path based on AASHTO and since there is a shared use path on both ends they questioned reducing the shared use path below the 8 feet and providing a sidewalk that is 5 to 6 feet wide. For this area, VTrans did not express a concern with providing an 8-foot shared use path in combination with 4 foot on-road bike lanes.
- **VT 289 interchange:** VTrans questioned how a shared use path or on-road bike lanes would connect to facilities on the east side on VT 289. It was discussed marking and signing bike lanes through the interchange using the existing 8-foot shoulders or a portion of them. It was also suggested connecting the shared use path through the interchange by consider widening the existing sidewalk by narrowing the southside shoulder. It was pointed out the crossing of ramps may be problematic and revisions to geometry may need to be considered. Improvements in the interchange area are currently not in the scope of work.
- **Indian Brook Crossing:** VTrans does not have plans to replace the culvert. When replaced it is likely the culvert would need to be on the order of 20 feet wide compared to the existing 6 foot width. Since what they would do is unknown and there is no replacement planned, the construction of the shared use path should consider maintaining the existing culvert, if possible, and any eventual culvert construction would need to accommodate the facilities that exist at the time of construction.

March 26, 2018

VTrans Coordination Meeting
Page 2 of 2

- **Stormwater** – Indian brook is an impaired stream for phosphorous and stormwater. VTrans encouraged maintaining the 5 foot vegetated buffer and consider a disconnect strategy for stormwater.

The meeting adjourned at 2 pm.

The foregoing is considered to be a true and accurate record of items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

Stantec Consulting Services Inc.



Greg Edwards, PE
Project Manager
Greg.Edwards@stantec.com

Attachment: Sign-in Sheet

c. Project Committee

Alternatives MeetingVT 15 Athens Drive to VT 289 Sidewalk/Path Scoping Study / 195311507

Date/Time: June 27, 2018 / 6:30 PM
Place: Essex Town Offices
Next Meeting: N/A
Attendees: See attached attendance list
Absentees: N/A
Distribution: Project Advisory Committee

An alternatives presentation was provided that described existing conditions, purpose and need and the developed alternatives. The 3 alternatives evaluated include No action, 10-Foot Shared Use Path, and 8-foot Shared Use Path. The following are questions and comments received from the public.

Item:	Action:
Safety of an 8' vs. 10' Path Is there a difference in terms of safety between the 8' and 10' path options?	Possibly but it depends how much usage the path will get and the type of users. The Project Advisory Committee (PAC) was interested in evaluating an 8-foot path since on road bike lanes are provided for experienced higher speed bikers and reduces the potential for conflicts with slower shared use path users.
Burlington Bike Path Width As a means of comparing the widths of the alternatives, how wide is the Burlington Bike Path?	The path is 8'-10', however all new sections are 10'. The Burlington bike path is not an ideal comparison due to the high usage. It is proposed the path will include a 1-foot shoulder on each side.
"Future Proofing" the Path Would a 10' path ensure that the path will continue to serve its purpose well into the future?	A 10-foot path will accommodate greater usage growth.
Rapid Flashing Beacons (RRFB) Can RRFBs be installed at the crosswalks, especially at the Athens Drive? Many people use these crosswalks and it was the attendee's observation that yield rates are low.	VTrans provides guidance for the installation of RRFBs and other crosswalk enhancements. These areas meet may the warrants for crosswalk enhancements and could be considered regardless of this project.
Red Lights vs. Yellow Lights at Enhanced Crossing Is there a choice between red and yellow lights at crosswalk enhancements?	RRFBs have yellow lights to warn drivers while red requires a stop. RRFBs do not use red lights but HAWK systems do. The HAWK system is potentially problematic due to driver's growing accustom to seeing them unlit. Drivers sometimes do not stop for systems that get infrequent use.

June 27, 2018

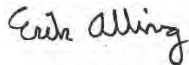
Alternatives Meeting
Page 2 of 2

Path Lighting Some attendees expressed support for pedestrian-level street lighting. It was pointed out that the path and bike lanes will be used during shorter daylight periods in winter months, use will be difficult to see.	Lighting will add costs and potentially additional impacts. The PAC will discuss including lighting in the scoping report.
Alternative Preferred by Attendees Based on the relatively small increase in cost and ROW impacts, the 10' path was supported by some of the attendees. Some attendees indicated an 8-foot wide path would suffice.	An 8-foot wide path does provide the opportunity to place the back end of the path at the same location as the 10-foot path, widen the on-road bike lanes from 4 to 5-feet wide and maintain the same impacts of a 10-foot wide path. Construction cost would increase due to the road widening.

The meeting adjourned at 7:15 PM

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

Stantec Consulting Services Inc.



Erik Alling PE, ENV SP
Project Manager

Phone: (802) 864-0223
Erik.alling@stantec.com

Attachment: Attendance List

c. Design File

PROJECT: VT Route 15 Bike and Pedestrian Improvements: Athens Drive to VT 289
MEETING: Local Concerns Meeting
LOCATION: Essex Town Office
DATE: 6/27/2018
TIME: 6:30 PM



	NAME	Entity Representing or Town of Residence	E-MAIL	PHONE
1	Christine Forde	CCRPC	cforde@ccrpcvt.org	(802) 846-4490
2	Greg Edwards	Stantec	greg.edwards@stantec.com	(802) 864-0223
3	Erik Alling	Stantec	erik.alling@stantec.com	(802) 864-0223
4	ANDY SUNTUP	Essex Junction	hank111@yahoo.com	(802) 857-5383
5	LINDA SUNTUP	Essex Junction	linda.jo91@yahoo.com	802-857-5383
6	Deb Ellen Holland	Essex	djehl2@yahoo.com	802-878-4499
7	MARIA GODLESKI	Essex Junction	rugbyad21ct76@yahoo.com	802 233 0946
8	ERIC BOWLER	Essex Jct.		
9	SAT SAREPALLI	CCRPC		
10	Frank Nadeau	Windsor	FrankVermont.com	
11	Tom Soules	tkseiles@msn.com		802-662-7970
12				


PROJECT: VT Route 15 Bike and Pedestrian Improvements: Athens Drive to VT 289
MEETING: Local Concerns Meeting
LOCATION: Essex Town Office
DATE: 6/27/2018
TIME: 6:30 PM




	NAME	Entity Representing or Town of Residence	E-MAIL	PHONE
13	Jeff Frolik	Essex	jfrolik@uvm.edu	802 878 6064
14	Eric Hamlin	Essex	RHAMLIN@DLHCE.COM	802-878-3956
15	Marshall Distel	CCRPC		
16	Diane Clemens		dclemens@saver.net	
17	Terry Gosselin	Essex	225 Pearl St Essex VT 05452	802 872-9119
18				
19				
20				
21				
22				
23				
24				
25				

APPENDIX B

Construction Costs

<div></div> <div>55 Green Mountain Drive South Burlington, VT 05403 Tel: (802) 864-0223</div>		<div>Quantity Summary</div> <div>Essex Village/Essex Town</div> <div>195311507</div> <div>VT Route 15 East - 8' Path</div>				
					Initials	Date
				Calc'd By:	ENA	5/15/2018
				Checked By:	DMY	5/18/2018
				Revised By:		
Checked By:						
			Alternative A			
			Description			
Item No.	Item Description	Unit	Unit Price	Quantity	\$	
201.10	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	LS	\$20,000.00	1	\$20,000.00	
203.15	COMMON EXCAVATION	CY	\$30.00	1500	\$45,000.00	
203.16	SOLID ROCK EXCAVATION	CY	\$50.00	150	\$7,500.00	
301.35	SUBBASE OF DENSE GRADED CRUSHED STONE	CY	\$35.00	1250	\$43,750.00	
490.30	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	TON	\$100.00	500	\$50,000.00	
601.2615	18" CPEP(SL)	LF	\$50.00	400	\$20,000.00	
604.20	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	EACH	\$5,000.00	5	\$25,000.00	
616.21	VERTICAL GRANITE CURB	LF	\$35.00	450	\$15,750.00	
630.10	UNIFORMED TRAFFIC OFFICERS	HR	\$50.00	250	\$12,500.00	
630.15	FLAGGERS	HR	\$25.00	1000	\$25,000.00	
635.11	MOBILIZATION/DEMOBILIZATION	LS	\$67,820.00	1	\$67,820.00	
641.10	TRAFFIC CONTROL	LS	\$25,000.00	1	\$25,000.00	
678.23	WIRED CONDUIT	LF	\$12.00	5000	\$60,000.00	
678.26	JUNCTION BOX	EACH	\$1,500.00	8	\$12,000.00	
900.620	SPECIAL PROVISION (PEDESTRIAN LIGHTING ASSEMBLY)	EACH	\$5,000.00	40	\$200,000.00	
900.645	SPECIAL PROVISION (LANDSCAPING)	LS	\$20,000.00	1	\$20,000.00	
900.645	SPECIAL PROVISION (ADD PED PHASE TO EX. SIGNAL SYSTEM)	LS	\$30,000.00	1	\$30,000.00	
900.645	SPECIAL PROVISION (STRENGTHEN CULVERT)	LS	\$20,000.00	1	\$20,000.00	
900.675	SPECIAL PROVISION (GREEN BIKE LANE PAVEMENT MARKING)	SY	\$125.00	450	\$56,250.00	
900.675	SPECIAL PROVISION (RETAINING WALL)	SY	\$200.00	800	\$160,000.00	
				Subtotal	\$915,570.00	
				Contingency	20.00%	
				Total	\$1,098,684.00	

 55 Green Mountain Drive South Burlington, VT 05403 Tel: (802) 864-0223		Quantity Summary			
		Essex Village/Essex Town			
		195311490			
		VT Route 15 East - 10' Path			
			Initials		
Calc'd By:	ENA	5/15/2018	Alternative A		
Checked By:	DMY	5/18/2018			
Revised By:					
Checked By:			Description		
Item No.	Item Description	Unit	Unit Price	Quantity	\$
201.10	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	LS	\$20,000.00	1	\$20,000.00
203.15	COMMON EXCAVATION	CY	\$30.00	1800	\$54,000.00
203.16	SOLID ROCK EXCAVATION	CY	\$50.00	250	\$12,500.00
301.35	SUBBASE OF DENSE GRADED CRUSHED STONE	CY	\$35.00	1500	\$52,500.00
490.30	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	TON	\$100.00	600	\$60,000.00
601.2615	18" CPEP(SL)	LF	\$50.00	400	\$20,000.00
604.20	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	EACH	\$5,000.00	5	\$25,000.00
616.21	VERTICAL GRANITE CURB	LF	\$35.00	450	\$15,750.00
630.10	UNIFORMED TRAFFIC OFFICERS	HR	\$50.00	250	\$12,500.00
630.15	FLAGGERS	HR	\$25.00	1000	\$25,000.00
635.11	MOBILIZATION/DEMOBILIZATION	LS	\$44,160.00	1	\$44,160.00
641.10	TRAFFIC CONTROL	LS	\$25,000.00	1	\$25,000.00
900.645	SPECIAL PROVISION (STORMWATER TREATMENT)	LS	\$30,000.00	1	\$30,000.00
900.645	SPECIAL PROVISION (LANDSCAPING)	LS	\$20,000.00	1	\$20,000.00
900.645	SPECIAL PROVISION (ADD PED PHASE TO EX. SIGNAL SYSTEM)	LS	\$30,000.00	1	\$30,000.00
900.645	SPECIAL PROVISION (STRENGTHEN CULVERT)	LS	\$20,000.00	1	\$20,000.00
900.675	SPECIAL PROVISION (RETAINING WALL)	SY	\$200.00	800	\$160,000.00
900.675	SPECIAL PROVISION (GREEN BIKE LANE PAVEMENT MARKING)	SY	\$125.00	450	\$56,250.00
				Subtotal	\$682,660.00
				Contingency	20.00%
				Sub Total	\$819,192.00
678.23	WIRED CONDUIT	LF	\$12.00	5000	\$60,000.00
678.26	JUNCTION BOX	EACH	\$1,500.00	8	\$12,000.00
900.620	SPECIAL PROVISION (PEDESTRIAN LIGHTING ASSEMBLY)	EACH	\$5,000.00	40	\$200,000.00
				Subtotal	\$272,000.00
				Contingency	20.00%
				Sub Total	\$326,400.00
				total	\$1,145,592.00

APPENDIX C

Cultural Resource Assessment

ARCHEOLOGICAL RESOURCE ASSESSMENT

VT Route 15 Scoping Study

Town of Essex
Chittenden County, Vermont

HAA # 5234.11

Submitted to:

Greg Edwards, PE, ENV SP
Senior Principal, Transportation
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www.acra-crm.org

June 2018

MANAGEMENT SUMMARY

SHPO Project Review Number:

Involved State and Federal Agencies: *Vermont Agency of Transportation (VTrans)*

Phase of Survey: *Archeological Resource Assessment*

LOCATION INFORMATION

Municipality: *Town of Essex*

County: *Chittenden County, Vermont*

SURVEY AREA

Length: *3,636 feet*

Width: *Approximately 100 feet (50 feet east and west of road centerline)*

RESULTS OF RESEARCH

Precontact Archeological sites within one mile: *Six*

Historic Archeological sites within one mile: *None*

NR/NRE districts in or adjacent: *None. Several Standing Structures listed on the Vermont Standing Structures Survey are located within the project alignment.*

Precontact Sensitivity: *One area of precontact archeological sensitivity was identified – a small terrace above an unnamed brook.*

Historic Sensitivity: *One area of historic sensitivity was identified on the front lawn of a historic home.*

RECOMMENDATIONS

Archeological potential is high in the southwest, southeast and northeast areas adjacent to the culvert. These areas contain level terrain adjacent to Bascom Brook. If these level terraces will be impacted during the culvert replacement activities, then Phase IB archeological testing is recommended.

Report Authors: *Elise Manning-Sterling*

Date of Report: *June 2018*

ARCHEOLOGICAL RESOURCE ASSESSMENT

INTRODUCTION

Hartgen Archeological Associates, Inc. (HAA, Inc.) was retained by Stantec to conduct an Archaeological Resource Assessment for the proposed scoping and planning study to make improvements along a 3,636 foot section of roadway along VT 15, located between Exit 9 of I-289 and Athens Road in the Town of Essex, Chittenden County, Vermont (Map 1). This scoping project proposes to identify options for this missing link between the Town and the Village pedestrian network. It is anticipated that a 10 foot-wide path will be constructed on either the north or south side of VT 15.

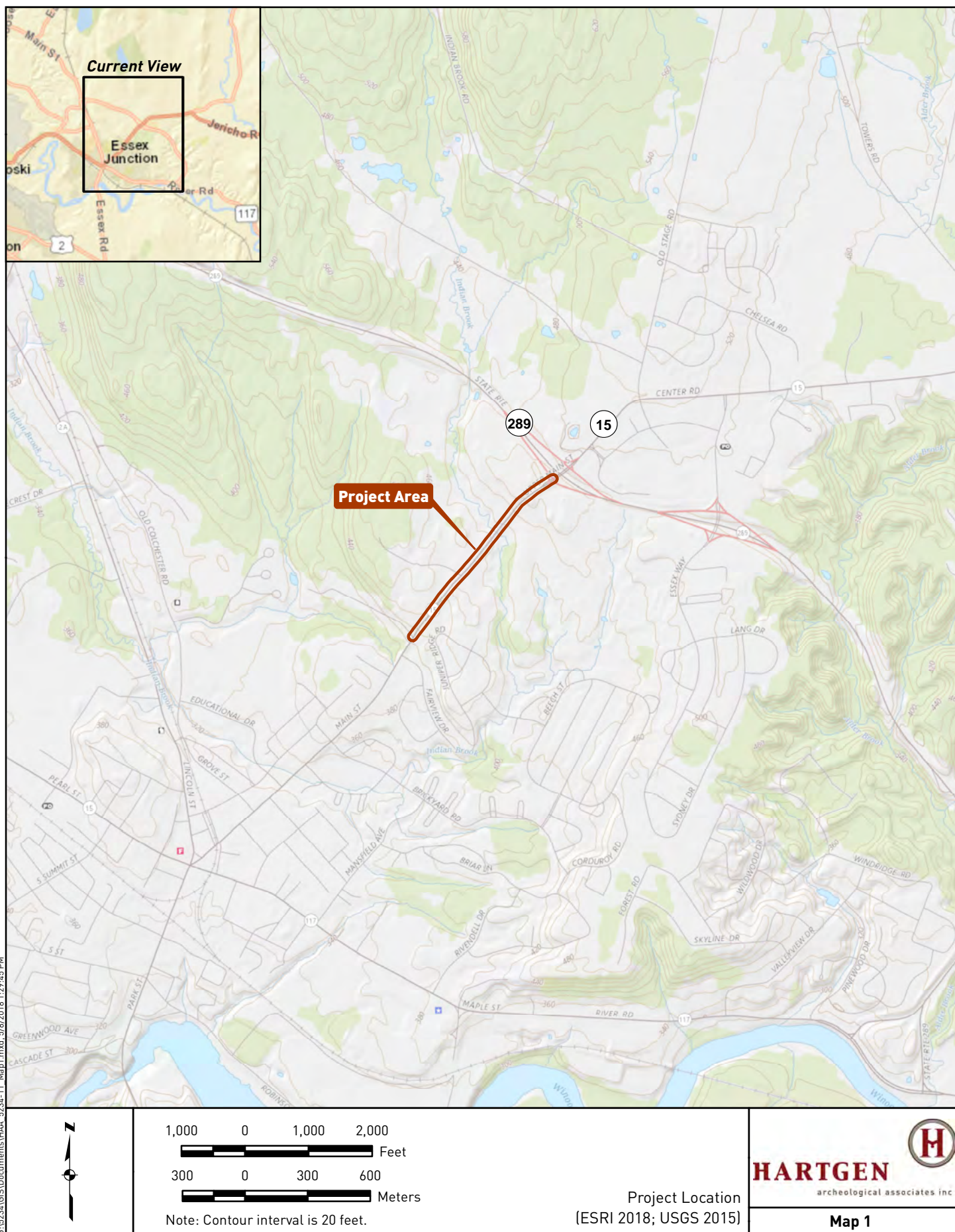
The Town of Essex will be involved in this scoping study, which is being funded by the Chittenden County Regional Planning Commission using Federal transportation funds and a local match. The cultural resources investigations required according to Section 106 of the National Historic Preservation Act. The project requires approval by the Vermont Agency of Transportation (VTrans), and the cultural resource report will be reviewed by the VTrans archaeology officer.

The primary objective of the ARA is to identify areas of archeological sensitivity based on environmental factors, known site information and historical information for the project Area of Potential Effects (APE). Reference to the general project vicinity is provided as appropriate to understanding the local cultural and historical context. Background research was conducted at the Vermont Division for Historic Preservation (VDHP) ORC (Online Resource Center) site where archeological site files, National Register (NR), State Register (SR) and town information were reviewed. A site visit was conducted by Elise Manning Sterling to observe and photograph existing conditions within the project area.

Environmental Overview and Current Conditions

Environmental characteristics of an area are significant for determining the sensitivity for archeological resources. Precontact and historic groups often favored level, well-drained locations near wetlands and waterways. Therefore, topography, proximity to wetlands, and soils are examined to determine if there are landforms in the project area that are more likely to contain archeological resources. In addition, bedrock formations or other lithic sources may contain resources that may have been quarried by precontact groups. Other locations can also be special purpose sacred and traditional use sites. Soil conditions can provide a clue to past climatic conditions, as well as changes in local hydrology.

The Town of Essex is located in the Vermont Lowlands physiographic region. The project alignment exhibits a variety of topographic features and variations in elevation. The southern portion of the project alignment is located at an approximate elevation of 410 feet above mean sea level (amsl). From this point, the terrain slowly rises in elevation, ending at an approximate elevation of 490 feet amsl at the northern terminus of the project APE. Located near the northern end of the project area is Indian Brook, which flows in a southeast to northwest direction. The brook is situated at the base of a ravine that is bordered to the north and south by sloping hillsides (Photo 1). A small unnamed, possibly seasonal, stream is located near the southern end of the project area. The small terrace adjacent to this stream is one of the archeological sensitivity areas identified during the assessment (Map 2).



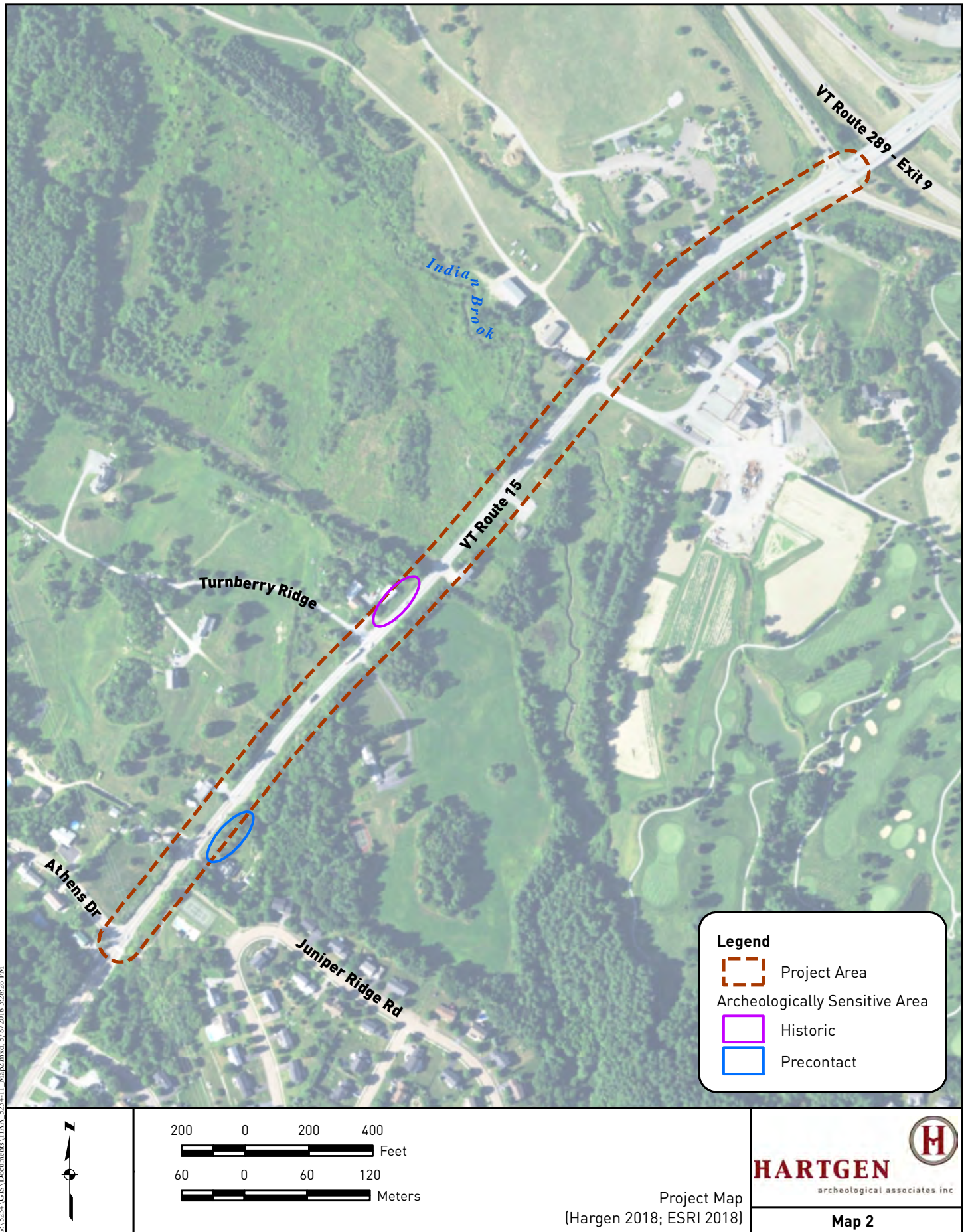




Photo 1. Photo shows the sloping hills bordering Indian Brook on both sides. The brook is located at the base of the slope with wetland grasses evident. View is to the north.

The bedrock within the project area is worthy of note. The leading edge of the prominent Hinesburg Thrust Fault, which extends from Bristol, Vermont northward into Canada, is located several hundred feet to the southwest of the south end of the project area at Athens Drive. This unique geologic feature delineates “the contact point where metamorphosed phyllites were pushed four miles westward up over the top of younger carbonate rocks during the Taconic Orogeny” (UVM 2018). The southern half of the project area contains Cheshire Formation bedrock, which is characterized by “argillaceous quartzite member, a fine to medium grained, gray and rusty weathering, dark gray argillaceous quartzite with abundant quartz veins (Data.gov 2018). The quartzite and quartz in the bedrock formations was a source of lithic material for precontact groups, which has been identified on several nearby precontact sites.

The bedrock in the northern half of the project alignment is from the Fairfield Pond Formation. This formation is characterized as “silvery tan and rusty weathering, light green to gray, phyllite, schist and phyllitic granofels; locally interbedded with dark gray argillaceous quartzite; interlayered with Pinnacle Formation. Contact with overlying Cheshire Formation is gradational” (Data.gov 2018). Prominent bedrock outcrops are evident at the northern end of the project area (Photo 2).

There are several soils types, alternating in small linear sections, along the project alignment. The primary soil types include Munson and Raynham silt loam, 2 to 6% slope and 6-12% slope, Munson and Belgrade, 12-25% slope and Scantic silt loam, 0-2% slope. All four of these soil types Coarse-silty glaciolacustrine deposits over clayey glaciolacustrine deposits glaciofluvial deposits, and are encountered on terrace formations between 90 to 1,200 feet amsl (USDA 2018).

Throughout the project alignment, on both sides of Route 15, the ground located directly adjacent to the road is primarily characterized as areas of slope and/or the location of drainage ditches. The two exceptions to



Photo 2. Photo shows the massive bedrock outcrops located at the northern end of the project area. View is to the northwest.

this characterization are areas of level terrain which were determined to be areas of archaeological sensitivity. A level terrace located on the east side of Route 15, situated directly above a small unnamed stream, was determined to be sensitive for the presence of precontact cultural material (Map 2, Photo 3). A historic archaeological sensitivity area is located on the west side of Route 15, directly north of Turnberry Ridge (Map 2, Photo 4). This level terrace comprises the front yard of a historic residence, dating to at least 1850, and possibly earlier.

DOCUMENTARY RESEARCH

Precontact Site File Research and Archeological Sensitivity

Examination of VDHP site files indicates that within several miles of the project area, there are several hundred precontact sites situated adjacent to Lake Champlain, the Winooski River, and their numerous tributaries, such as Indian Brook, and associated wetlands. There are six precontact sites located within a one mile (1.6 km) radius of the APE, all identified during testing for the Chittenden County Circumferential Highway (Dillon 1985, Knight 2001, Sheehan & Thomas 1993, Thomas & Florentin 2002 and Wilson 1990). These include VT-CH- 220, VT-CH- 229, VT-CH- 230, VT-CH- 486, VT-CH- 490 and VT-CH- 9191, all but one of which were identified adjacent to Indian Brook. The remaining site, VT-CH-229, was identified on a high terrace overlooking the Winooski River.

Site VT-CH-9191 was identified in a field associated with the Lang Farm, located at the north end of the project area. This Late Archaic site was identified through the surface collection of a cornfield on a higher terrace above Route 15. The site collection consisted of five artifacts, including quartz and quartzite flakes, and a base and mid-section of a corner notched Late Archaic projectile point. The site is located on the north side of Indian Brook, approximately 300 feet east of VT Route 15.



Photo 3. Photo shows the level terrace adjacent to an unnamed stream, which was determined to be a precontact sensitivity area. View is to the south.



Photo 4. Photo shows the front yard of a historic residence which was determined to be a historic archeological sensitivity area. View is to the north.

Table 1. Vermont Archeological Inventory (VAI) precontact sites within one mile (6. km) of the APE.

VAI Site No.	Site Identifier	Description	Approximate Proximity to Project Area
VT-CH-220	BT	A precontact site of indeterminate time period located adjacent to Indian Brook that contained lithic material, including a groundstone tool and chert, quartz and quartzite flakes	Located approximately 1,000 feet north of the north end of the project alignment
VT-CH-229	Old Stations	A precontact site of indeterminate time period that contained chert, quartzite and quartz flakes.	Located approximately 1,000 feet north of the north end of the project alignment
VT-CH-230		An extremely important multi-component site, containing a Paleoindian component, and four loci dating to the Early Archaic. The Paleoindian camp was briefly occupied between 8,200 and 8,000. Two of the Early Archaic camp sites produced evidence of an area of intense wood processing with quartz and quartzite scraping tools (similar to VT-CH-486). The site is located on a low rise on the east side of Indian Brook.	Located approximately 1,000 feet north of the north end of the project alignment
VT-CH-486		A multi-component site containing four Early Archaic period loci located on the east side of Indian Brook. Researchers identified areas of intense activity related to wood processing, as well as quartz and quartzite scraping tools (similar to VT-CH-230). There was also evidence to these activities were conducted within small shelters.	Located approximately 1,000 feet north of the north end of the project alignment
VT-CH-490		A multi-component precontact site which contained two separate Early Archaic loci which contained quartz scrapers from local bedrock, and quartzite tools made from bedrock located approximately 30 km to the south. The researchers stated that there was evidence of small structures.	Located approximately 1,000 feet north of the north end of the project alignment

The VDHP Environmental Predictive Model was completed for the entire project area which produced an overall rating of 24 (Appendix 1), with a rating of 32 or above indicating precontact sensitivity. The overall project area received points based on its location in an area with a high density of recorded precontact sites (32 points) within a travel corridor (12 points), and containing a small stream channel (12 points). This rating also reflects a large reduction (-32 points) for the presence of disturbance, primarily in the form of slope from man-made drainages along a large portion of the project alignment (Photos 5 and 6). Level areas within the project alignment that do not exhibit obvious disturbance would have a higher archeological sensitivity, with a rating of 56, as they would not have the -32 point reduction.

As noted earlier, there is a small level terrace located on the east side of Route 15, situated directly above a small unnamed stream, was determined to be sensitive for the presence of precontact cultural material (Map 2). While there is likely to be some disturbance directly adjacent to the road from road construction and installation of a waterline and water hydrant, the portion of the terrace overlooking the stream may be undisturbed. If project plans involve ground disturbance to this terrace, then Phase IB archeological testing is recommended.



Photo 5. Photo shows a large roadside gully. A large portion of the project area contained similar drainage gullies adjacent to the roadway. View is to the south.



Photo 6. Photo shows a large shallow roadside gully on the east (right) side of the road, and large bedrock outcrops on the west (left) side of the road. View is to the north.

Historic Site File Search and Archeological Sensitivity

National and State Register, Cemeteries

There are three historic structures listed on the State Register (VHSSS) located within the project APE. In addition, there are several historic structures located within the project area which were not included as part of the Vermont State Register survey. All of the structures located within the project area will be outlined further within the historic structure assessment report.

There are no National Register sites located within or adjacent to the project APE.

There are no known cemeteries located within or adjacent to the project area (Hyde and Hyde 1991).

Historic Archaeological Sites

There are no historic archeological sites located within the project vicinity or within one mile of the APE.

Historic Maps

A review of historic maps of the project area was conducted to attain an overview of the changing historical and environmental landscape within the project area. This review includes the study of historic structures that may be or may no longer be extant, alterations to road and rail systems, and changes in stream and river courses. Two 19th-century maps, the 1857 Walling map and the 1869 Beers map, depict the roadways and river and stream courses in the project area, as well as the names of the residents who lived there in those years (Maps 3 & 4).

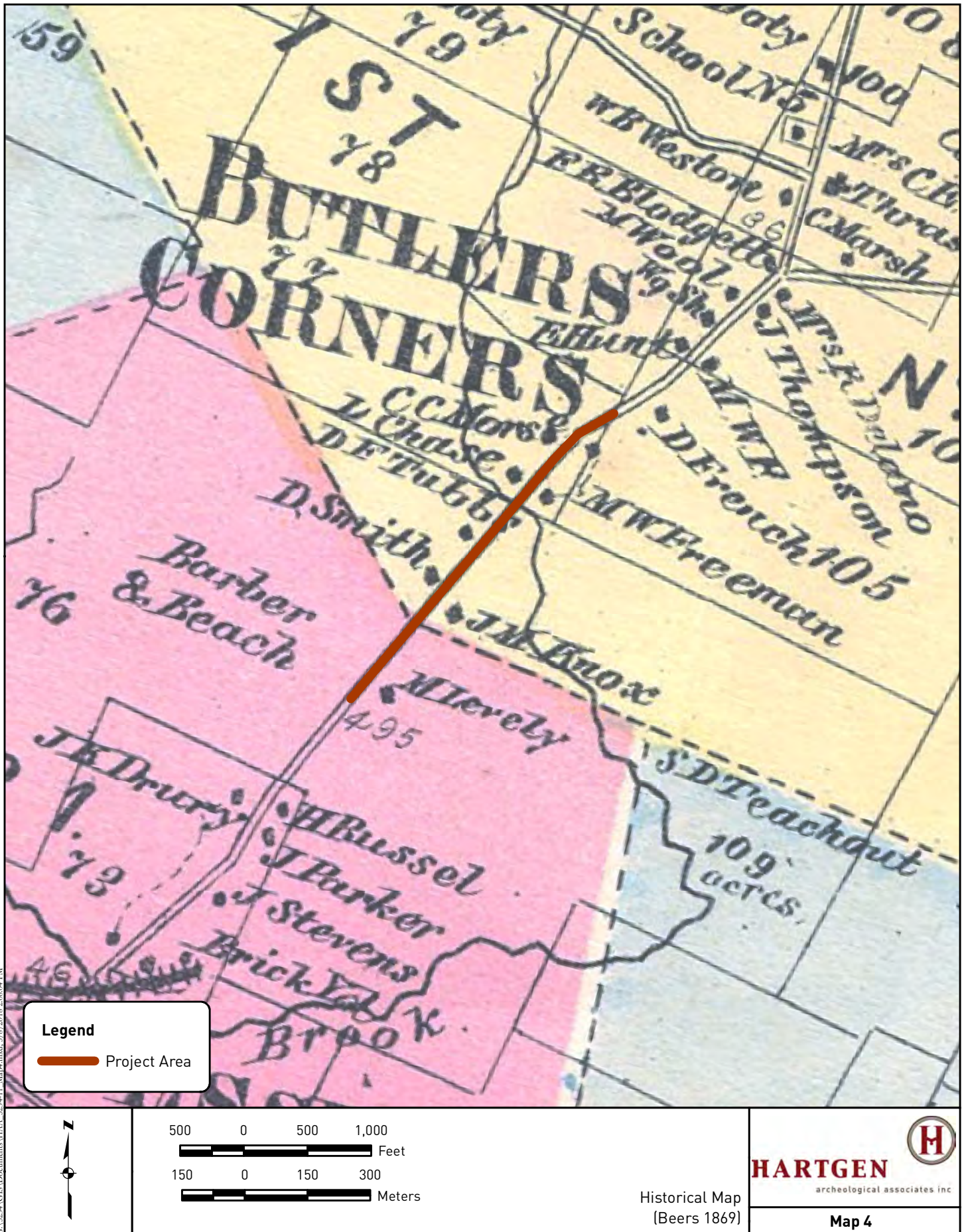
Four houses are depicted within the project area on the 1857 Walling map – including the residences of D. Smith, B. Parker, F. Hunt and W. Freeman. These likely represent the structures #3, #4, #5 and #9, respectively, as shown on Map 5. These four structures are also shown on the 1869 Beers map, which at that time were the homes D. Smith, L. Chase, C. Morse, and M. W. Freeman. The 1869 map depicts an additional four structures –including the residences of D.F. Tubb, M. Levely, J.M. Knox, as well as one unlabeled structure to the northeast of M.W. Freeman. The unlabeled structure may be a barn or other outbuilding associated with the M.W. Freeman (aka Lang Farm). The home of M. Levely is likely the structure #6 on Map 5. The structures designated as D.F. Tubb and J.M. Knox are no longer extant, as there are no other historic structures at these approximate locations on the landscape.

There are several historic houses along the project alignment, most all of which are set back far from the road, and are separated from the road by drainage gullies, slope, or, in one instance, by massive bedrock outcropping. Only one of the historic properties contains a level yard area that is situated close to the road. The home of D. Smith, as depicted on both the 1857 and 1869 maps, which dates to at least 1850, is considered to be historic archaeological sensitivity area. The house is located on the west side of Route 15, directly north of Turnberry Ridge, and is designated as Structure #3 on Map 5. This level terrace comprises the front yard of a historic residence, dating to at least 1850, and possibly earlier.

ARCHEOLOGICAL POTENTIAL AND RECOMMENDATIONS

Two site visits were made to the Vermont Route 15 project area to assess areas of archaeological sensitivity and areas of disturbance. A site visit was made in March 2018 when there was still light snow cover on the ground. At that time, standing structures were documented, and a general assessment was made concerning possible areas of archaeological sensitivity. A second site visit was made in June 2018 to definitively identify areas of sensitivity, slope and disturbance.







There are two areas of archeological sensitivity identified within the project area. A level terrace located on the east side of Route 15, situated directly above a small unnamed stream, was determined to be sensitive for the presence of precontact cultural material. A historic archaeological sensitivity area is located on the west side of Route 15, directly north of Turnberry Ridge. This level terrace comprises the front yard of a historic residence, dating to at least 1850, and possibly earlier. If either of these areas will be impacted during the project improvements, then Phase IB archeological testing is recommended. This ARA report should be submitted to VTrans archaeology officer for review and concurrence.

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APPENDIX 1: VDHP Archaeological Resources Assessment Form

VERMONT DIVISION FOR HISTORIC PRESERVATION

Environmental Predictive Model for Locating Pre-contact Archaeological Sites

Project Name

DHP No.

County

Map No.

Staff Init.

Town

Date

Additional Information

Environmental Variable	Proximity	Value	Assigned Score
A. RIVERS and STREAMS (EXISTING or RELICT):			
1) Distance to River or Permanent Stream (measured from top of bank)	0- 90 m 90- 180 m	12 6	
2) Distance to Intermittent Stream	0- 90 m 90-180 m	8 4	
3) Confluence of River/River or River/Stream	0-90 m 90 –180 m	12 6	
4) Confluence of Intermittent Streams	0 – 90 m 90 – 180 m	8 4	
5) Falls or Rapids	0 – 90 m 90 – 180 m	8 4	
6) Head of Draw	0 – 90 m 90 – 180 m	8 4	
7) Major Floodplain/Alluvial Terrace		32	
8) Knoll or swamp island		32	
9) Stable Riverine Island		32	
B. LAKES and PONDS (EXISTING or RELICT):			
10) Distance to Pond or Lake	0- 90 m 90 -180 m	12 6	
11) Confluence of River or Stream	0-90 m 90 –180 m	12 6	
12) Lake Cove/Peninsula/Head of Bay		12	
C. WETLANDS:			
13) Distance to Wetland (wetland > one acre in size)	0- 90 m 90 -180 m	12 6	
14) Knoll or swamp island		32	
D. VALLEY EDGE and GLACIAL LAND FORMS:			
15) High elevated landform such as Knoll Top/Ridge Crest/ Promontory		12	
16) Valley edge features such as Kame/Outwash Terrace**		12	

17) Marine/Lake Delta Complex**		12	
18) Champlain Sea or Glacial Lake Shore Line**		32	
E. OTHER ENVIRONMENTAL FACTORS:			
19) Caves /Rockshelters		32	
20) <input type="checkbox"/> Natural Travel Corridor <input type="checkbox"/> Sole or important access to another drainage <input type="checkbox"/> Drainage divide		12	
21) Existing or Relict Spring	0 – 90 m 90 – 180 m	8 4	
22) Potential or Apparent Prehistoric Quarry for stone procurement	0 – 180 m	32	
23)) Special Environmental or Natural Area, such as Milton aquifer, mountain top, etc. (these may be historic or prehistoric sacred or traditional site locations and prehistoric site types as well)		32	
F. OTHER HIGH SENSITIVITY FACTORS:			
24) High Likelihood of Burials		32	
25) High Recorded Site Density		32	
26) High likelihood of containing significant site based on recorded or archival data or oral tradition		32	
G. NEGATIVE FACTORS:			
27) Excessive Slope (>15%) or Steep Erosional Slope (>20)		- 32	
28) Previously disturbed land as evaluated by a qualified archeological professional or engineer based on coring, earlier as-built plans, or obvious surface evidence (such as a gravel pit)		- 32	
** refer to 1970 Surficial Geological Map of Vermont			
			Total Score:
Other Comments :			
0- 31 = Archeologically Non- Sensitive 32+ = Archeologically Sensitive			



48 Upper Main Street-The Thibault House.

HISTORIC RESOURCES IDENTIFICATION

VT ROUTE 15 SCOPING STUDY

ESSEX JUNCTION, TOWN OF ESSEX, CHITTENDEN COUNTY, VERMONT



HARTGEN

archeological associates inc



www.hartgen.com

Vermont Route 15 Scoping Study,
Essex Junction, Town of Essex,
Chittenden County, Vermont

Submitted to:

Stantec
55 Green Mountain Drive
South Burlington, VT 05403

Submitted by:

Walter R. Wheeler
Senior Architectural Historian
Hartgen Archeological Associates, Inc.
1744 Washington Avenue Extension
Rensselaer, New York 12144

July 2018

Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification

Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification

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Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification

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Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification

Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont

Historic Resources Identification

INTRODUCTION

Hartgen Archeological Associates, Inc. (Hartgen) conducted an Historic Resources Identification assessment for the Vermont Route 15 Scoping Study (Project) located in the Town of Essex, Chittenden County, Vermont (Maps 1 and 2).

The Town of Essex will be involved in this scoping study, which is being funded by the Chittenden County Regional Planning Commission using Federal transportation funds and a local match. The cultural resources investigations required according to Section 106 of the National Historic Preservation Act. The project requires approval by the Vermont Agency of Transportation (VTrans), and the cultural resource report will be reviewed by the VTrans archaeology officer.

Background research was conducted at the Vermont Division for Historic Preservation (VDHP) ORC (Online Resource Center) site where archeological site files, National Register (NR), State Register (SR) and town information were reviewed. A site visit was conducted by Elise Manning Sterling on 5 April 2018, to observe and photograph existing conditions within the project area.

PROJECT LOCATION AND DESCRIPTION

The project includes improvements along a 3,636 foot section of roadway along VT 15, located between Exit 9 of I-289 and Athens Road in the Town of Essex, Chittenden County, Vermont (Map 1). The scoping project proposes to identify options for this missing link in the Town and the Village pedestrian network.

Description of the Area of Potential Effects (APE)

It is anticipated that a 10 foot-wide path will be constructed on either the north or south side of VT 15 along the entire length of the project.

HISTORICAL BACKGROUND

The Town of Essex was chartered in 1763, although settlement within the project APE doesn't appear to have made much headway until after 1800. A settlement to the southwest of the project APE (today's Essex Junction) was initially known as Painesville. With the establishment of a rail line from Northfield to Burlington in the 1840s, development of that community began in earnest. By 1854 six railroads had their junction ties in the area; in 1862 a station was built in the village of Painesville and its name was changed to Essex Junction. The Village of Essex Junction was incorporated in 1892 (Chapin & Dodge 2014).

Northeast of the project area is the hamlet of Butler's Corners, an unincorporated hamlet established in the 19th century which has been entirely subsumed by late-20th century construction. VT-15 connects Butler's Corners and Essex Junction, and was, in the 19th century, occupied by successful farmsteads (Structures 3 thru 6 and 9).

The outward expansion of Burlington in the post-World War II era, fueled by the affordability of private automobiles, resulted in the extension of suburban developments into the Town of Essex, and transformed the Village of Essex Junction into a bedroom community for Vermont's largest urban area during the third quarter of the 20th century. Several of the structures in the project APE (Structures 1, 2, 7, 8 and 10) date to this period. The houses built at that time occupy landscaped sites and sit back from the road.

Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont

Historic Resources Identification

The completion of VT-289 in 1993 has fueled a dramatic expansion of commercial construction (to the north of the highway, north of the project APE) and transformation of former agricultural land within the project APE into sites for recreation (Structures 5 and 9).

Historical Map Review

Two 19th-century maps, the 1857 Walling map and the 1869 Beers map, depict the project APE, and establish the presence of several structures within the survey area during those two periods, together with the names of early occupants of these buildings (Maps 3 & 4).

Four houses are depicted within the project APE on the 1857 Walling map (Map 3) – including the residences of D. Smith, B. Parker, F. Hunt and W. Freeman. These likely represent the structures #3, #4, #5 and #9, respectively, as shown on Map 5. These four structures are also shown on the 1869 Beers map (Map 4), which at that time were the homes D. Smith, I. Chase, C. Morse, and M. W. Freeman, respectively. The 1869 map depicts an additional four structures—including the residences of D. F. Tubb, M. Levely, J. M. Knox, as well as one unlabeled structure to the northeast of M. W. Freeman. The unlabeled structure may have been a barn or other outbuilding associated with the M. W. Freeman (aka Lang Farm). The home of M. Levely is probably the same as that identified as Structure 6 in this survey (Map 5). The structures designated as D. F. Tubb and J. M. Knox are no longer extant; there are no historic structures standing today at these locations.

STREETSCAPE VIEWS



Figure 1. Looking north-northeast from the south end of the project APE.

**Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification**



Figure 2. Looking southwest from the north end of the project APE.

ARCHITECTURAL DESCRIPTIONS

Structure 1. 200 Main Street

Structure 1 is a one-story wood frame ranch style house of rectangular plan with shallow gable roof, with one-story gabled garage attached. This single family dwelling was constructed c. 1975. It is not eligible for listing on the National Register due to insufficient age (Figure 3).

Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification



Figure 3. Structure 1, looking northwest.

Structure 2. 4 Upper Main Street

Structure 2 is a one-story wood frame ranch style house of rectangular plan with shallow gable roof, with one-story gabled garage attached. This single family dwelling was constructed c. 1975. It is not eligible for listing on the National Register due to insufficient age (Figure 4).



Figure 4. Structure 2, looking west.

Structure 3. 1 Turnberry Ridge (D. Smith house)

The D. Smith house appears on both the 1857 Walling and 1869 Beers maps. It was recorded as occupied by “D. Smith” on both. The house appears to have originally been built c. 1850.

The D. Smith house is a one-and-one-half story wood frame cape with slightly off-center door. It has a side-gable roof, sits on a stone foundation, and is sheathed with clapboards. Formerly it had a central chimney, the location of which is indicated by a patch in the asphalt shingle roof. The front door is flanked by two double-hung sash on either side, each with 6-over-6 divided lights. A one-story wood frame wing extends from the south end of the house; its roof slope is similar to that of the main portion of the dwelling. The wing may have been constructed in the 19th century; if so it was extensively altered in the third quarter of the 20th century by alterations to its fenestration pattern a surface treatments, which now include brick veneer. The house appears to be unoccupied at present (Figures 5 and 6).

What appears to have been originally constructed as a barn on the property has been renovated for use as a dwelling. It is one-and-one-half stories in height, is wood framed, and has vertical board siding. Paired casement windows have replaced the original door and window arrangement so that today the building bears little resemblance to a barn. A one-story framed wing with shallow gable roof extends to the north

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from the west end of this building; it contains three open vehicle garage bays. A slightly taller portion at the north end contains an additional vehicular bay (Figures 5 and 7).

The D. Smith house unfortunately lacks enough integrity at present to be eligible for listing on the National Register.



Figure 5. Structure 3, looking northwest.

**Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification**



Figure 6. Structure 3, looking north.



Figure 7. Structure 3, looking northwest at the converted barn complex.

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Structure 4. 38 Upper Main Street (Lang House)—VHSS 0405-123

The Lang house (Structure 4) was identified as occupied by “I. Chase” on the 1857 Walling map; it may have been constructed c. 1840 (Figures 8 and 9). A two-story brick masonry house with side-gable roof, it is three bays wide and two bays deep and measures approximately 20’ x 16’ in size. Small corbeled chimneys are located at the peak of each gable end wall. The principal entrance is located in the central bay, and is sheltered by a small gable roof supported on square posts, dating to the late 20th century. The roof has a Greek Revival cornice with returns on the gable end walls. Semi-circular windows, now covered, are located in the gable ends, and formerly lit the attic. Windows throughout are replacement undivided double-hung sash. A substantial one-and-one-half story wing extends from the back (west side) of the main block; it is wood framed and has a broad gable roof which is at right angles with those of the masonry portion of the building. This wing, which incorporates a two-bay garage is of later date, but achieved this form by the time it was included in a VHSS survey in 1984 (VHSS 0405-123). The wing may incorporate portions of an earlier structure (it was said, in 1984, that it “was once a milkhouse”, and it was extensively renovated to its current form c. 1970. These alterations significantly impact the appearance of this resource (Czaikowski 1984).

The house is accompanied by a one-story multiple bay pole barn of rectangular plan with a side-gable roof. It was not possible to determine if this structure is an extensively remodeled version of that which appears in the 1984 survey photographs, or if it is an entirely new structure.

Although listed on the Vermont State Register, alterations to the wing, windows, porch, and outbuildings make this structure ineligible for listing on the National Register.



Figure 8. Structure 4, looking west.

Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification



Figure 9. Structure 4, looking west. A closer view of the house.

Structure 5. 48 Upper Main Street (Thibault House, now Essex Family Fun and Entertainment Center)—VHSS 0405-7

The Thibault house—the name derived from the owner when the building was surveyed in 1976—was attributed a c. 1885 construction date by that survey. The house appears to be older than that, and may be, or may incorporate portions of, the “F. Hunt” house which is documented as being on this site in 1857 (Walling 1857). Elements which suggest a construction date in the middle decades of the 19th century rather than late in that period include the Gothic Revival labels over the windows and doors, and the bracketed cornice.

The house is rectangular in plan, is three bays in width and two in depth (Figures 10 and 11). Its flattened mansard roof gives this brick masonry house the appearance of being one-and-one-half stories in height. A large corbelled chimney rises out of the central portion of the flat upper section of the shingled roof. The lower portion of the roof is punctuated by two gabled dormers on each elevation; these lend the roofline much interest and visually lighten the roof. A round window in the second floor center of the west elevation creates interest on that façade (Figure 11).

A one-story porch whose flattened hip roof is supported on six columns on paneled plinths, extends across the east elevation (Figure 10). This porch was constructed after 1976, when the house was surveyed

Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont

Historic Resources Identification

(Fonda 1976b). Similarly, the gable-roofed porch on the south elevation was added after 1976, and the original slate roof, present during the earlier survey, has since been removed.

The principal entrance is in the form of a single door with rectangular transom, and is flanked by paired 2-over-2 double-hung sash. The principal entrance door and secondary entry on the south elevation have been replaced with steel doors, probably within the past 20 years, and the original transoms are now lost.

Since the 1976 survey this property has been transformed from agricultural use to recreational use, a change which has included the removal of the original outbuildings (an aluminum silo now stands by itself to the east of the house (Figure 2). This house has now lost its agricultural setting, and is within a commercial context that includes a large parking lot and mini-golf course. Even with the above-noted changes the house retains sufficient integrity to be considered eligible for listing on the National Register; however that eligibility does not extend to its associated landscape.



Figure 10. Structure 5, looking west.

**Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification**



Figure 11. Structure 5, looking north. The west elevation with circular window is visible in this view.

Structure 6. 203 Main Street (Fairview)

Structure 6, 203 Main Street, was constructed c. 1855, and was noted on the Walling map of 1857 as owned by “Mars & Kimball” (Map 3). It is a large wood-framed dwelling of rectangular plan, one-and-one-half stories in height, and with two large steeply-pitched gabled dormers on each of the slopes of its large side-gable roof. A substantial addition, two stories in height and with a shallow gable roof which intersects the east end of the earlier part of the house, appears to date to the third quarter of the 20th century, and is incongruous in detail and scale. Similarly, the large shed-roofed enclosed porch which extends across much of the south elevation, and the second floor deck attached to the north elevation are later additions which detract from the ability to appreciate the earlier portions of the structure (Figures 12 and 13).

Windows throughout are single or paired undivided light double hung sash, some of which appear to be recent replacements, possibly vinyl. The house is sheathed with clapboards and has an asphalt shingle roof.

203 Main Street does not currently retain enough integrity to be considered eligible for listing on the National Register; the abovementioned alterations have significantly impacted the 19th century appearance of the building and have covered substantial portions of the original south and east facades.

**Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification**



Figure 12. Structure 6, looking east.



Figure 13. Structure 6, looking southeast.

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Historic Resources Identification

Structure 7. 25 Upper Main Street

Structure 7, 25 Upper Main Street, is a two-story duplex wood-frame dwelling with jettied second floor. The house is sheathed with vinyl siding and its shallow side-gable roof is covered with asphalt shingles. The two principal entrances are sheltered by a pentice roof extending from the face of the second floor elevation; it is supported on three square posts. The facades is roughly symmetrical; at the first floor level the two doors are flanked in the outer bays by tripartite windows with central fixed sash; at the second floor level three double-hung windows with undivided sash are eqispaced along the length of the façade. A two-bay garage with side-gable roof is attached to the south side of the dwelling (Figure 14).

This duplex, constructed c. 1975, is not eligible for listing on the National Register due to insufficient age.



Figure 14. Structure 7, looking east.

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Historic Resources Identification

Structure 8. 29 Upper Main Street (State Farm Insurance)

A one-story wood-frame ranch type single family dwelling, now converted for professional office space. This side-gable roofed building sits on a concrete block foundation and is covered with vinyl siding (Figure 15). It was constructed c. 1975 and is not eligible for listing on the National Register due to insufficient age.



Figure 15. Structure 8, looking east.

Structure 9. 43 Upper Main Street (Lang Farm)-- VHSS 0405-6

The VHSS survey form attributes a construction date of c. 1835 to this house, but that appears to be too early (Fonda 1976a). A c. 1840-55 construction date is more appropriate for this resource.

The Lang house is a two-story brick side-passage house with gable entry, three bays in width and measuring 26' x 34' in plan (Figures 16 and 17). The house is three bays in width on the street elevation, and has a centrally-located entrance. A semi-circular window lights the attic gable end wall, and a chimney with corbelled top is located at the peak of the roof, set back a short distance from the plane of the front elevation. A one-and-one-half story wood-frame shingled and brick-faced wing is offset from the main block of the house and is attached to its southeast corner. This wing was constructed between 1971 and

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1976; it replaces the original rear ell of the house, which burned in the earlier year. A one-story covered porch with turned columns, dating to c. 1910, fills the inset corner formed by the house and wing.

Associated with the house is a large gable-roofed frame barn with gable roof, built in 1879 (Figure 18). Other structures, noted in the survey of the site undertaken in 1976, do not appear to survive. A second large barn has been constructed, c. 2000; it is rectangular in plan, has a gable roof, and a prominent cupola. Additional service structures have been constructed on the property within the past 20 years. These structures support the present use of the property as “The Barns at Lang Farm,” which houses three shops, a golf course, and a nursery. The house is rented for overnight stays and the property is marketed as a wedding venue.

The Langs purchased the property in 1919 and operated a dairy farm here until 1986. A “garden shop” was opened in 1990. Conversion of the property from dairy farming to hospitality services has involved the renovation and alteration of all of the structures on the property. An antique shop was opened on the property in 2009; the “garden barn” was completed in 2015. The facilities are operated by the fourth generation of the Lang family to own the property (www.langbarn.com).

The substantial alterations undertaken in the early 1970s, together with the loss of historic context caused by the removal of most of the original agricultural outbuildings and landscape features and the significant alterations undertaken to the remaining outbuildings, make this farmstead, listed on the Vermont State Register, ineligible for listing on the National Register.



Figure 16. Structure 9, looking east-southeast.

**Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
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Figure 17. Structure 9, looking northwest.



Figure 18. Barns associated with Structure 9, looking east.

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Historic Resources Identification

Structure 10. 55 Upper Main Street

55 Upper Main Street is a one-story wood-frame ranch style dwelling of L-shaped plan with intersecting gable roofs of shallow slope (Figure 19). Double-hung sash are distributed in irregular spacing on each of its elevations. This house, constructed c. 1960, is not considered eligible for listing on the National Register due to lack of integrity. It has vinyl replacement windows and is covered with vinyl siding.



Figure 19. Structure 10, looking east-southeast.

NATIONAL REGISTER ELIGIBILITY SUMMARY

Of the 10 structures surveyed, three (Structures 4, 5, and 9) have previously been surveyed and are listed on the Vermont State Register (Table 1). All have undergone alterations and changes to their context since having been surveyed, so that only one structure (Structure 5, the Thibault house) is now considered to be eligible for listing on the National Register. Of the remaining structures, three (Structures 3, 6 and 10) which are greater than 50 years in age are not considered eligible for listing on the National Register due to loss of integrity. Four additional structures (Structures 1, 2, 7 and 8) are less than 50 years in age.

Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification

Table 1. Summary of Resources Surveyed for the Vermont Route 15 Scoping Study

Building Number (see Map 2 for locations and photo angles)	Resource Address	Constructi on Date	Historic Use	Previous Survey and/or NR status	Recommended National Register Status
1	200 Main Street	c. 1975	Single family home		Not NRE
2	4 Upper Main Street	c. 1975	Single family home		Not NRE
3	1 Turnberry Ridge	c. 1850	Single family home		Not NRE
4	38 Upper Main Street	c. 1840	Single family home, "Lang House"	VSSS #0405-123	Not NRE
5	48 Upper Main Street	c. 1855	Single family home, "Thibault House"	VSSS #0405-7	NRE
6	203 Main Street	c. 1855	Single family home, "Fairview"		Not NRE
7	25 Upper Main Street	c. 1975	Duplex dwelling		Not NRE
8	29 Upper Main Street	c. 1975	Single family home		Not NRE
9	43 Upper Main Street	c. 1840- 55	Single family home, "Lang Farm"	VSSS #0405-6	Not NRE
10	55 Upper Main Street	c. 1960	Single family home		Not NRE

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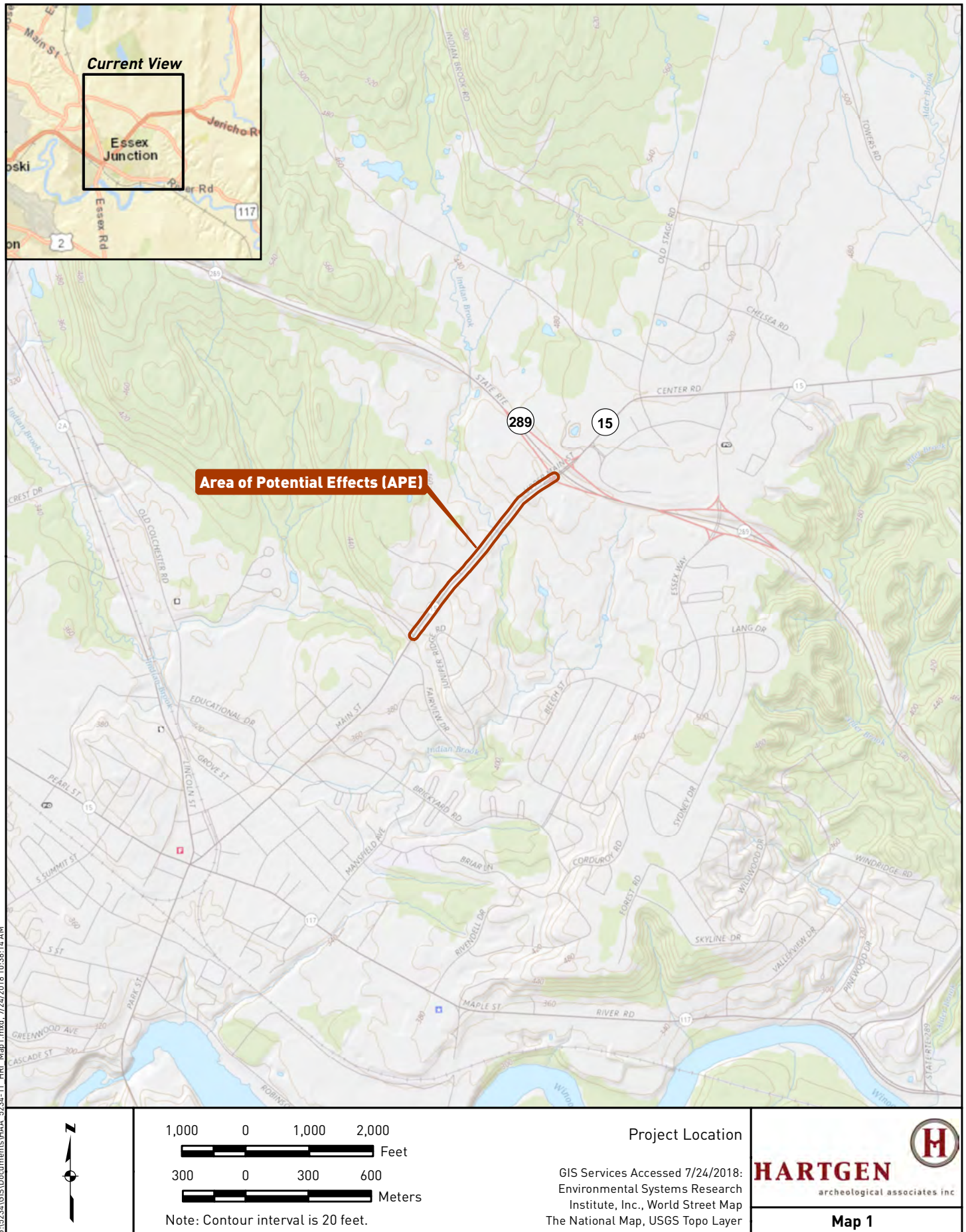
Walling, Henry Francis

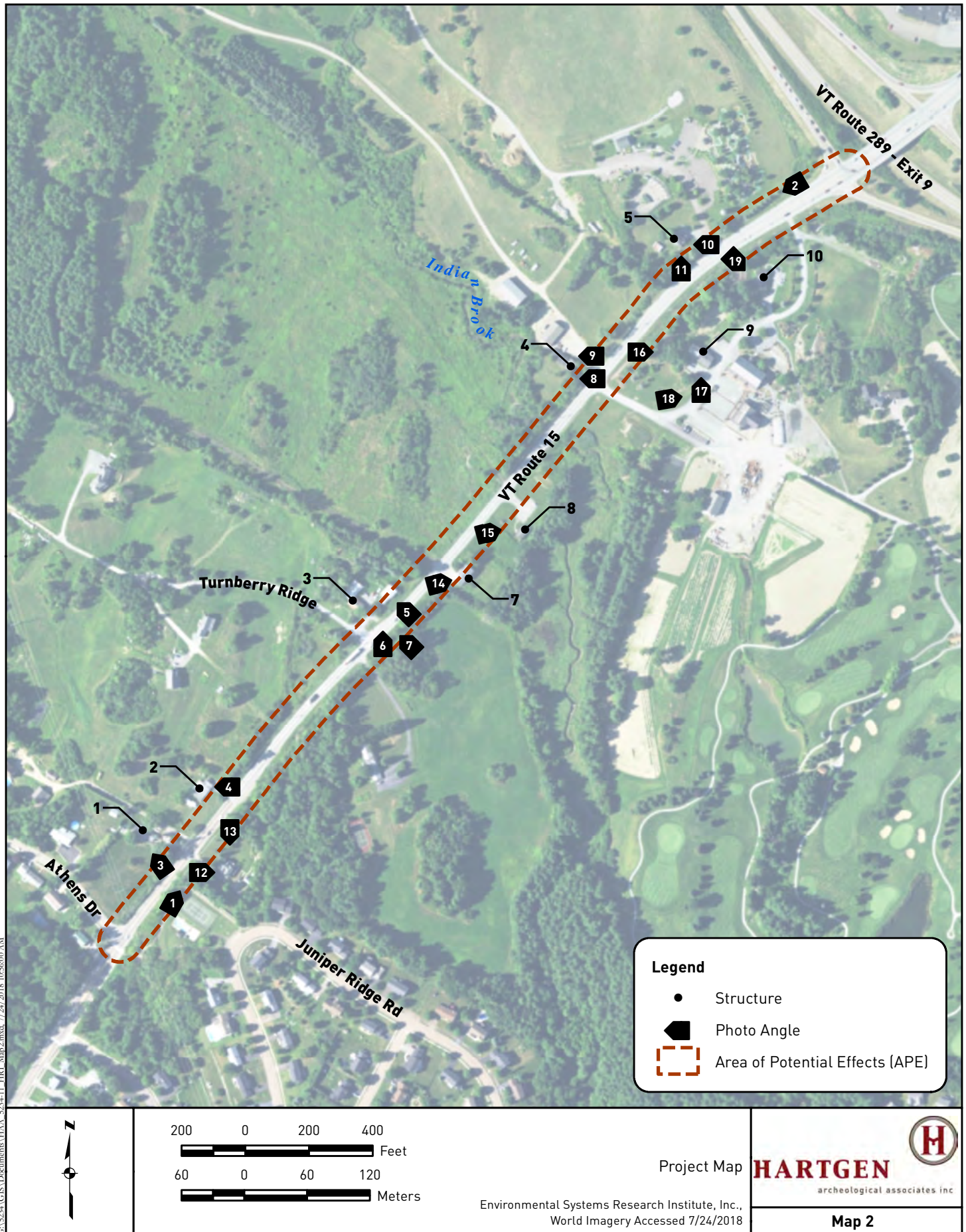
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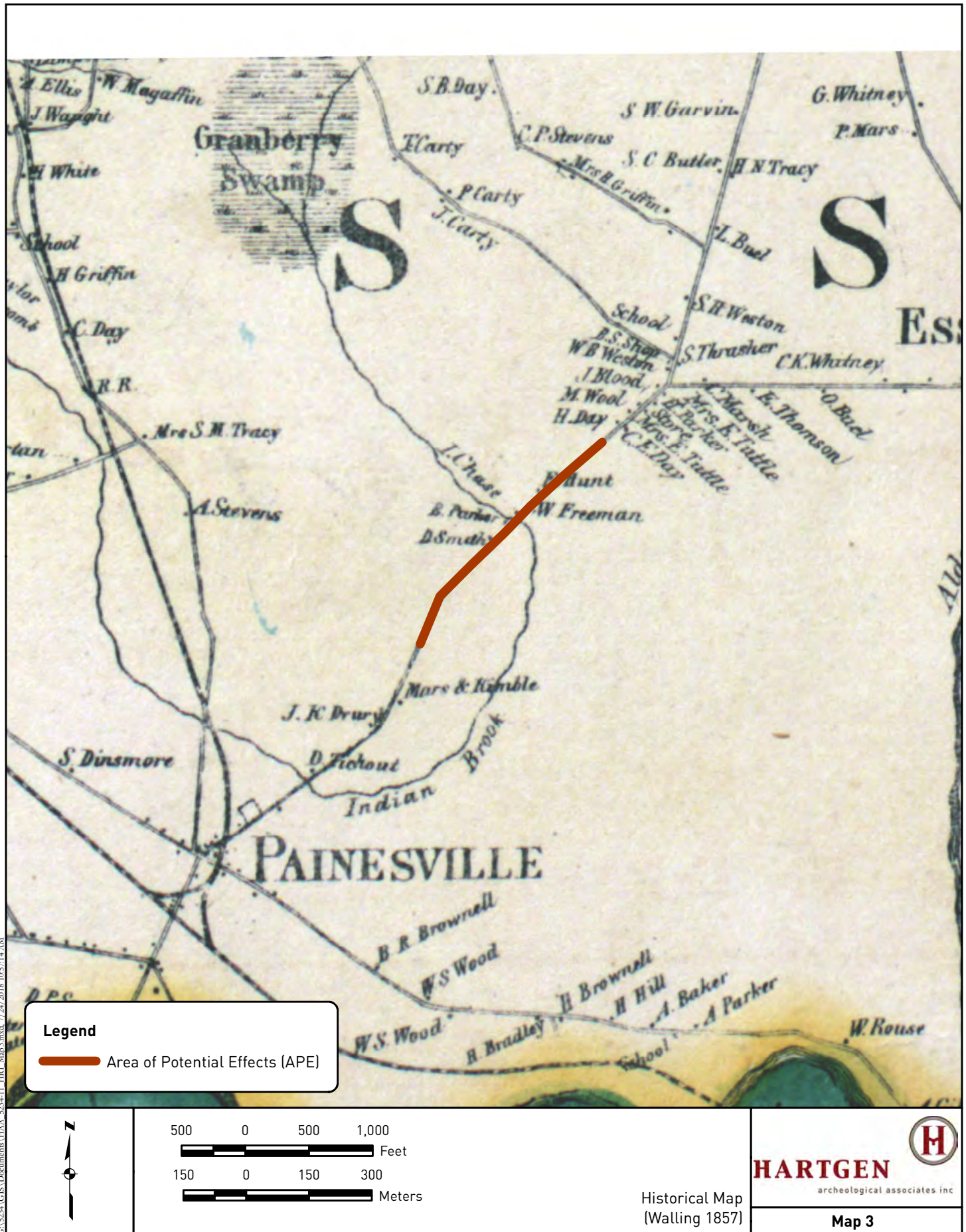
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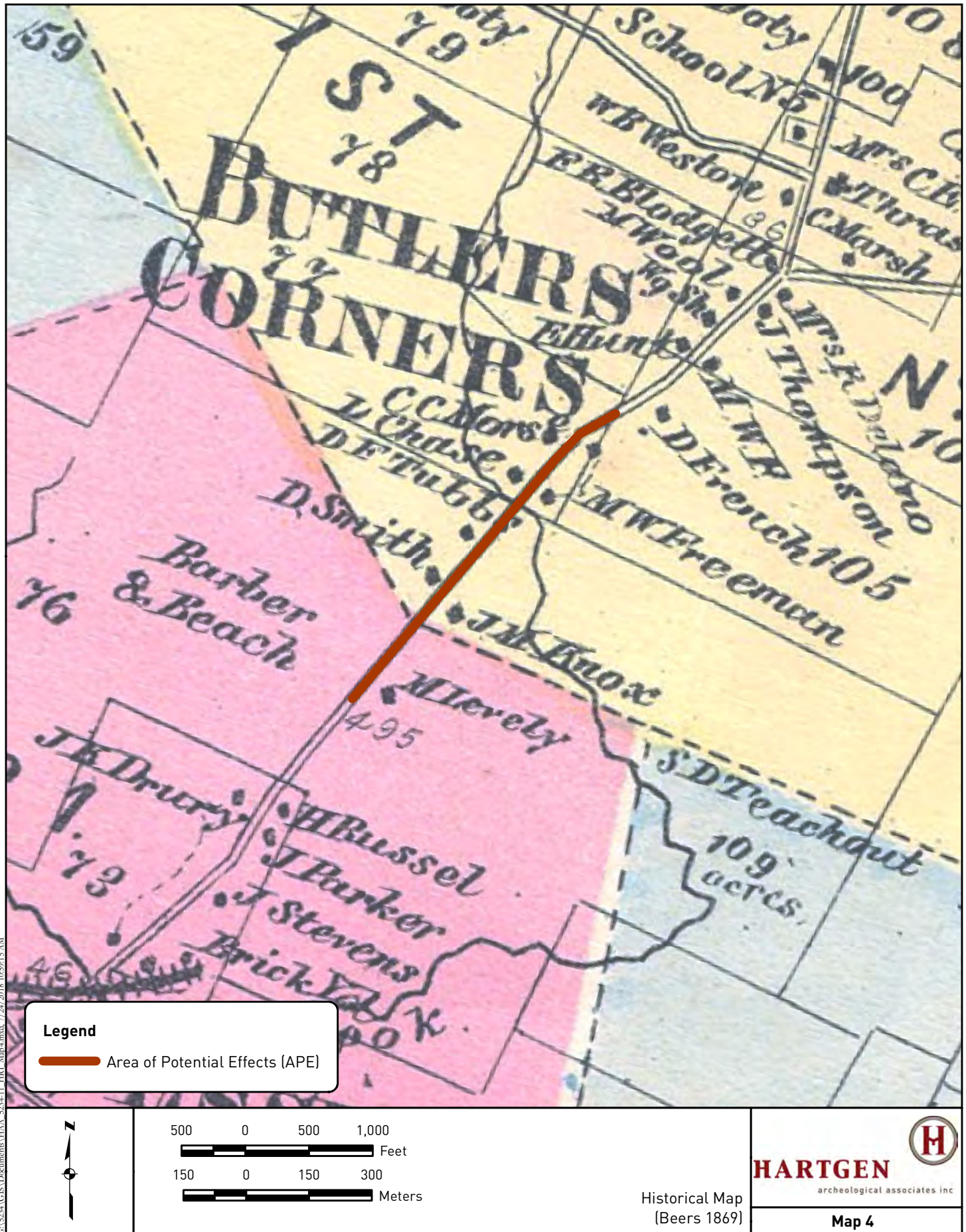
Vermont Route 15 Scoping Study, Town of Essex, Chittenden County, Vermont
Historic Resources Identification

Maps









Qualifications



EDUCATION: Rensselaer Polytechnic Institute
Bachelor of Architecture May 1987
Bachelor of Science, Building Science, May 1986

QUALIFICATIONS: 36 CFR Part 61 Qualified Architectural Historian

SPECIAL TRAINING: Architectural History Consultant Training
VDHP, Burlington, VT, April 2018.
Vermont Community Development Program Qualified Professionals Training
VDHP, Montpelier, VT, September 2016.
Evaluating Significance of Historic and Archeological Resources Workshop
Vermont College, Montpelier, VT, May 2001
Historic Preservation Consultant training and Section 106 training

PROFESSIONAL EXPERIENCE:

June 1999 – Present Senior Architectural Historian
Hartgen Archeological Associates, Inc.
Oversee and prepare architectural resource surveys, including pre-assessments, literature reviews and historical documentation; field reconnaissance; report and proposal preparation. Responsible for preparing documents to be reviewed by VAOT, VDHP, and USACOE, for SEQR, Section 106 and NEPA. Preparation of reports generated under ACT 250 and the FCCs Nationwide Programmatic Agreement, including preparation of forms 620 and 621.

November 1992 – June 1999 Architectural History Consultant
Identified, analyzed, and assessed historic structures; researched and wrote for exhibitions and publications including Historic Structures Reports; executed drawings in connection with restoration projects. Clients included Rensselaer County Historical Society; Robert Pierpont, both in Troy, NY; towns of Durham and Oak Hill, NY; Albany Institute of History and Art; Metropolitan Museum of Art; the New York Public Library, and John G. Waite Associates, Albany, NY.

May 1984—November 1992 Junior Architect
Worked for the Office of the New York State Architect, Wagoner & Reynolds, and in the office of Robert N. Pierpont as a Junior Architect. Responsible for restoration projects including the Governor's Mansion, the New York State Capitol, and Wilborn Temple (all in Albany, NY), and the Knickerbocker Mansion, in Schaghticoke, NY.

PRINCIPAL PUBLICATIONS:

- In preparation *Building Albany: Studies in the Vernacular Architecture of the Upper Hudson and Lower Mohawk Valleys*. Albany, NY: SUNY Press.
- 2010 "Once adorned with quaint Dutch tiles...: A Preliminary Analysis of Delft Tiles Found in Archaeological Contexts and Historical Collections in the Upper Hudson Valley," in Penelope Ballard Drooker and John P. Hart, eds., *Soldiers, Cities and Landscapes: Papers in Honor of Charles L. Fisher*. New York State Museum Bulletin 513, 107-150. Albany, NY: New York State Museum.
- 2009 *Architects in Albany*. Diana S. Waite, editor. Albany, NY: Mt Ida Press/ Historic Albany Foundation. Contributed two biographical essays.
- 2005 *The Encyclopedia of New York State*, Peter Eisenstadt, editor. Syracuse, NY: Syracuse University Press, 2005. Author of entries "Philip Hooker," "Archimedes Russell," "Upright and Wing Houses," "Cobblestone Architecture," "Empire State Plaza," and "Architects and Architecture of Syracuse and Central New York."
- 2000 *The Marble House in Second Street: Biography of a Town House and its Occupants, 1825-2000*. Troy, NY: Rensselaer County Historical Society, 2000.

APPENDIX D

Natural Resources

To:	Greg Edwards South Burlington, VT	From:	Polly Harris South Burlington, VT
File:	CCRPC VT 15 Athens Drive to VT 289 Scoping Study 195311507	Date:	November 9, 2017

**Reference: CCRPC VT 15 Athens Drive to VT 289 Scoping Project
Natural Resources Review**

Stantec Consulting Services Inc. (Stantec) conducted a preliminary review of the natural resources present within CCRPC VT 15 Athens Drive to VT 289 Scoping Study Project area in the Village and Town of Essex, Vermont. Specifically, as part of this investigation, Stantec identified and characterized wetlands, streams, rare, threatened or endangered (RTE) species, wildlife habitat, agricultural land, 4(f) and 6(f) public lands, and hazardous waste sites. Following is a summary of the findings.

General Site Description

The VT 15 corridor project area extends along VT 15 from Athens Drive northeast approximately 0.70 mile to the VT 289 interchange. VT 15 is a busy travel corridor, and the scoping study will identify a preferred link for a shared use path adjacent to the existing road. An existing shared use path located along the east side of VT 15 ends at Athens Drive. The project corridor includes residential developments near the southern project limits, with scattered homes and businesses along the remainder of the route.

Natural resources were reviewed within 50 feet of the existing road.

Natural Resource Review Summary – Review of Existing Materials

Stantec used the Vermont Agency of Natural Resources (ANR) Natural Resources Atlas mapping program¹ to evaluate known natural resources within the Project Area.

Wetlands and Streams. According to the ANR program, there is a Vermont Significant Wetland Inventory (VSWI) wetland mapped along Indian Brook within the project area (see attached ANR Wetlands/Streams figure). This is a Class II wetland with a regulated 50-foot buffer.

Indian Brook flows from north to south under VT 15 near the northern limits of the project area. This is a perennial stream with a mapped FEMA 100-year floodplain. It also has an ANR 50-foot river corridor (see attached ANR Rivers Floodplains figure). Indian Brook is stormwater-impaired.

RTE Review. No rare plant species or rare habitat types are mapped by ANR within the project area (see attached RTE/Conserved/Haz figure).

Agricultural Soils. According to the *Natural Resources Atlas*, the soils within the project area include Statewide agricultural soils (see attached ANR Prime Ag Map). The Farmland Policy Protection Act

¹ <http://anrmaps.vermont.gov/websites/anra/>

Reference: Natural Resources Review

does not apply to projects within existing road ROWs. If any work is proposed outside of existing ROW, authorization from the NRCS via form AD-1006, the Farmland Conversion Impact Rating form, may be required.

Public Lands. The Project Areas do not include public recreation lands (a Section 4(f) resource) or public lands developed with Land and Water Conservation Funds (a Section 6(f) resource)(see attached RTE/Conserved/Haz figure).

Hazardous Waste Sites. The ANR mapping program was reviewed for information on Hazardous Waste Sites in the project vicinity. No active Hazardous Waste Sites or Hazardous Waste Generators are located within the project area (see attached RTE/Conserved/Haz figure).

Natural Resource Review Summary – Site Investigation

Stantec conducted a site visit on October 18, 2017 to evaluate natural resources present within the project area.

Wetlands/Streams. The wetland associated with Indian Brook was verified during the site investigation. This wetland is a palustrine forested, scrub/shrub, and emergent wetland located on both sides of VT 15. This wetland is a mapped Vermont Class II wetland with a regulated 50-foot buffer.

Additional wetland areas were identified during the site visit. One is a wetland system located approximately 300 feet south of Turnberry Ridge on the east and west sides of VT 15, associated with a drainage culvert below the road. This palustrine emergent and scrub/shrub wetland is likely a Vermont Class II wetland with a regulated 50-foot buffer.

Two small wetland areas were identified at the intersection of Turnberry Ridge and VT 15. A palustrine emergent wetland is located at the southwest corner of this intersection, while a palustrine forested wetland is located on the east side of VT 15 near this intersection. Both wetlands are small and likely merit Vermont Class III ratings.

RTE Species. Stantec identified no RTE species during the October 18, 2017 site visit. Much of the corridor been disturbed to some degree by mowing, clearing, or adjacent development. As a result, it is possible but unlikely that any RTE plant or animal species occur within the small undeveloped portions of the project area.

Wildlife Habitat. The Project Areas provide habitat for various wildlife species common to Vermont's rural areas such as black-capped chickadee (*Parus atricapillus*), blue jay (*Cyanocitta cristata*), raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), and gray squirrel (*Sciurus carolinensis*), as well as other species that may travel through the area. The proximity to the interstate and a state road limits the value of the wildlife habitat.

Federal and State Wetland/Stream Regulations. The US Army Corps of Engineers (Corps) regulates wetlands and streams under the provisions of Section 404 of the Clean Water Act. The Corps has issued a Programmatic General Permit for the State of Vermont. Typically, wetland and stream impacts of less than one acre may be covered by a Programmatic General Permit (GP), with

Reference: Natural Resources Review

impacts of less than 3,000 s.f. often eligible for approval via a one-page Self-Verification Form. Note that the current GP will expire in December 2017, and the new GP may have different conditions and requirements.

The Vermont ANR regulates Class I and II wetlands and their buffers. The wetland area associated with Indian Brook is a Class II wetland. Therefore, any impacts to this wetland or its 50-foot buffer would likely require authorization under the Vermont Wetland Permit or Vermont General Permit. The wetland system associated with the culvert approximately 300 feet south of Turnberry Ridge is likely a Class II wetland, while the small wetlands located at the intersection of VT 15 and Turnberry Ridge are likely Class III wetlands. The classification of these other wetlands identified within the project corridor must be verified by ANR.

ANR also regulates activities in streams. A Stream Alteration Permit is required for movement, excavation, or fills involving 10 or more cubic yards in a perennial stream. There are General and Individual Permits depending upon the activity.

Stormwater designs must address the impaired status of Indian Brook.

STANTEC CONSULTING SERVICES, INC.

Polly Harris
Environmental Project Manager
Phone: (802) 497-6407
Fax: (802) 864-0165
Polly.Harris@stantec.com

Attachments: Photos, ANR Mapping

Reference: Natural Resources Review

CCRPC VT 15 Athens Drive to VT 289 Scoping Study Area Photographs



Photo 1. View looking southwest at Indian Brook wetland complex in distance, adjacent to VT 15. 10/18/17



Photo 2. View looking southwest at Indian Brook wetland (to left) adjacent to VT 15. 10/18/17

Reference: Natural Resources Review



Photo 3. View to southwest of typical roadside habitat along corridor. 10/18/17



Photo 4. View to northeast of small palustrine emergent wetland adjacent to project area. 10/18/17

Reference: Natural Resources Review












Photo 5. View to northeast showing typical upland meadow habitat adjacent to VT 15. 10/18/17



Photo 6. View to northeast showing Indian Brook wetland (to left) adjacent to VT 15. 10/18/17



LEGEND

-  Vernal Pools Confirmed – AE/
-  Vernal Pools Unconfirmed – AI
-  303(d) List of Impaired Stream
- Wetland - VSWI**
 -  Class 1 Wetland
 -  Class 2 Wetland
 -  Buffer
-  Wetlands Advisory Layer
-  Stream
-  Town Boundary

1: 9,739

September 27, 2017



NOTES

Map created using ANR's Natural Resources Atlas

495.0 0 248.00 495.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

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1" = 812 Ft. 1cm = 97 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

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- ### LEGEND
- DFIRM Floodways
 - Flood Hazard Areas (Only FEMA)
 - AE (1-percent annual chance flood)
 - A (1-percent annual chance floodpl)
 - AO (1-percent annual chance zone feet)
 - 0.2-percent annual chance flood ha
 - River Corridors (Jan 2, 2015)
 - Small Streams - 50ft Setback
 - Stream
 - Town Boundary

1: 9,739

September 27, 2017



495.0 0 248.00 495.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

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1" = 812 Ft. 1cm = 97 Meters

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NOTES

Map created using ANR's Natural Resources Atlas



LEGEND

- ◆ Hazardous Site
- ◆ Hazardous Waste Generators
- Managed Lands**
 - State Forest, Fee ownership
 - State Park, Fee ownership
 - Non-fee interest
- Conserved Lands**
 - Housing and Conservation Board
 - Local Government
 - Private Organization
 - US Dept. of Defense
 - US Fish and Wildlife Service
 - US National Park Service
 - UVM and State Colleges
 - VT Dept. Buildings and General Se
 - VT Division for Historical Preservati
- Rare Threatened Endangered**
 - Threatened or Endangered
 - Rare
- Stream
- Town Boundary

1: 12,961

October 31, 2017



NOTES

Map created using ANR's Natural Resources Atlas

658.0 0 329.00 658.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

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1" = 1080 Ft.

1cm = 130 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

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LEGEND

Soils - Prime Agricultural

- Local
- Local (b)
- Not rated
- Prime
- Prime (b)
- Prime (f)
- Statewide
- Statewide (a)
- Statewide (b)
- Statewide (c)
- Stream
- Town Boundary

Project Area

1: 9,739

September 27, 2017



NOTES

Map created using ANR's Natural Resources Atlas

495.0 0 248.00 495.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

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1" = 812 Ft. 1cm = 97 Meters

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